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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,413	03/20/2002	Steve Smith	9052-91	9507
20792	7590	09/20/2005	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC PO BOX 37428 RALEIGH, NC 27627			BAHTA, ABRAHAM	
			ART UNIT	PAPER NUMBER
			1744	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/937,413	Applicant(s) SMITH ET AL.	
	Examiner Abraham Bahta	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-34 and 36-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-34 and 36-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

The following suggestions is made for claim 1.

The first two lines of claim 1 would be best described if re-written as follows: An apparatus suitable for functioning in a multi-diameter pipeline wherein the apparatus is a pipeline pig having a shaft and the pipeline pig is provided with a suspension system adapted to fit the shaft and deleting the phrase "apparatus comprises a pipe line pig" recited on lines 10-11.

Claim Rejections - 35 USC § 112

Claims 29, 32 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 29 is confusing. It is not clear what is being claimed. Does applicant intends to claim a pipeline pig or a suspension system or a pipeline pig in combination with a suspension system or a suspension system in combination with a pig shaft. The claim should be drafted accordingly.

Claim 32 recites a suspension mounting slidably connected to a suspension system housing. It is not clear which housing being referred. It is the Examiner understanding that the apparatus is intended to fit in the inner surface of a pipe; however, this limitation (a suspension system housing) is not clear and the applicant is requested to clarify or show the housing in the drawings.

Claim 34: The claim recites the piston is internally mounted. Does this mean the piston is inside the pipe being cleaned or in the pig shaft?

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loeffler (USP 2,88,7118) in view of Mizuho (USP 4,938,167) or WO/97/14910.

Loeffler teaches a pipe-cleaning device comprising a plurality of wheels (14) and links and arm (56, 65,66, 55)) wherein the links are mounted around a piston (79), which is mounted in a pump having a shaft. As shown in figure 2 the wheels are supported by the radially mounted links and arms and the links and arms of the wheel assembly are offset from the axis of the longitudinal body (A) of the device, i.e., the links and arms do not overlap or are not parallel to the longitudinal body. The links are joined to a slidable sleeve and maintain the wheels in their outwardly extended position. See col. 3, lines 64-72, col. 23-31 and col. 5, lines 35-49. Loeffler further teaches the device comprises a bowl-shaped cleaning head. See col. 2, lines 35-39.

Loeffler does not require a tie rod; however, Mizuho et al teach a self-propelled vehicle for use in pipes wherein the vehicle comprises a link assembly in which the device travels along an inner surface of a pipe to be worked on by the operation of a drive unit (3) and transmission (5) while being pressed against the inner surface of the pipe by a collapsing assembly (2). Further, the vehicle comprises an air cylinder (25) and a piston (26) projectable into and retractable from the vehicle body (9). As shown in

figure 2B the vehicle comprises a link 23 or a support frame in which a tie-rod like or block member is connected to the sliding piston rod (26). See col. 2, lines 31-42 and col. 3, lines 31-33.

Similarly, WO/97/14910 teaches an inner manipulator for pipes which can travel inside a pipe and is arranged in a multiple-member swiveling arm which carries at its free end a system carrier for carrying a testing system or a working device. See Abstract. As shown in figure 1 the manipulator comprises a tie-rod like member connected to arm or link (16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a tie-rod to the device of Loeffler so that the wheel of the device fits snugly against the wall of the inner surface of a pipe being cleaned.

Claims 30-31: The references discussed above, do not specifically require an offset angle as specified in claims 30-31; however, it would have been obvious to one of ordinary skill in the art the time the invention was made to have adjusted the inclination of the links that maintain the wheels in their extended outwardly position in order to maintain the desired load of the wheels against the inside wall of the pipe so that the surface of the wheel wears evenly.

Claim Rejections - 35 USC § 103

Claim 33, 36-47 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loeffler in view of Mizuho.

Loeffler is discussed above. Loeffler does not require a spring-loaded piston; however, Mizuho et al teach a self-propelled vehicle for use in a pipe wherein the vehicle comprises a spring-loaded piston. See col. 5, line 55 through col. 6, line 19.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the piston of Loeffler with a spring mechanism so that the device propels.

Claim 37-38: Loeffler teaches the device comprises a cleaning head disc-like member (15) and engaging means such as tube and ribs (18). See col. 2, lines 35-48 and figure 1.

Claim 40: Loeffler teaches the device comprises at least two wheel assemblies. See figure 1 and 2.

Claim 41: As shown in figure 1 of Loeffler one wheel assembly is offset from the plane of the second wheel assembly.

Regarding claim 42, the recitation that the pipeline pig is adapted to be a monitoring pig, it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

Claim 45: Loeffler teaches the device is intended to clean the inside surface of a pipe by passing the device down in the pipeline. See col. 1, lines 17-20.

Claims 36 and 46-47: Since, Loeffler in view of Mizuho et al teach applicant's claimed structure, it is the Examiner position that the device of Loeffler is adapted to be

an inspecting pig as recited in claim 36, a detecting pig as recited in claim 46 and a monitoring pig as recited in claim 47.

Claim 49: Loeffler does not require coupling the pipeline pig to another pig; however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have connected the pig of Loeffler to another pig, since it has been held that mere duplication of the essential working parts of a device and connecting the devices together involves only routine skill in the art. Such a modification, coupling two pigs to each other, would have been obvious in order to facilitate the cleaning of a long pipe.

Claim Rejections - 35 USC § 103

Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Loeffler in view of Mizuho as applied to claim 29 above and further in view of VerNooy (USP 3,755,908).

Loeffler discussed above, does not require a turnbuckle; however, VerNooy teaches a pipeline comprising feeler arms in which the arms are provided with a turnbuckle. See col. 4, line 10.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a turnbuckle to the device of Loeffler for coupling and tightening the links so that the links may maintain the wheels in outwardly extended position.

Response to Applicant's Argument/Remarks


The applicant argues that Loeffler fails to disclose a suspension arms of the wheel


assembly being offset from the axis of the shaft. The Examiner contends that as shown in figure 1 and 2 the link assembly of Loeffler is offset from the shaft (48).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abraham Bahta whose telephone number is (571) 272-1532. The examiner can normally be reached on Monday - Friday; 11:30 am - 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on (571) 272-1142. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


A. Bahta
09/15/05


JOHN KIM
SUPERVISORY PATENT EXAMINER